

Listing of Claims:

1-31. (canceled)

32. (new) A solder joint structure for a semiconductor apparatus having a top surface, comprising:

a two-layered copper structure at the top surface of the semiconductor apparatus, having a bottom layer and a top layer, the top layer about 0.6 μm thick;

a nickel layer sandwiched between and contacting the two copper layers; and

a solder ball formed on and contacting the about 0.6 μm thick copper layer.

33. (new) The solder joint structure claim 32, further comprising a layer of Cu_6Sn_5 formed during a reflow process, in which the copper is derived from the 0.6 μm thick copper layer and the tin is derived from the solder ball.